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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR   | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|------------------------|---------------------|------------------|
| 10/568,054   | 02/12/2007  | Robert Eric Montgomery | P1087US04           | 3707             |
| 53096  | 7590        | 12/23/2009             | EXAMINER            |                  |
| DISCUS DENTAL, LLC<br>8550 HIGUERA STREET<br>CULVER CITY, CA 90232 |             |                        | PATEL, YOGESH P     |                  |
|  |             |                        | ART UNIT            | PAPER NUMBER     |
|  |             |                        | 3732                |                  |
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|  |             |                        | 12/23/2009          | PAPER            |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|                              |                        |                         |  |
|------------------------------|------------------------|-------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b>     |  |
|                              | 10/568,054             | MONTGOMERY, ROBERT ERIC |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>         |  |
|                              | YOGESH PATEL           | 3732                    |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 62-78 and 102-176 is/are pending in the application.
- 4a) Of the above claim(s) 170-175 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 62-78 and 102-169, 176 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of claims 62-78 in the reply filed on 02/23/09 is acknowledged. It is noted that new claims 102-176 have been added. The traversal is on the ground(s) that there is undue search burden in the absence of restriction. This is not found to be persuasive because the search for each group requires different search queries. Furthermore, execution of a comprehensive search of all claims in the instant application would not only constitute an undue burden on the Examiner, but consideration of the findings of such a search for patentability determination would be unduly onerous. It is further noted that a comprehensive search for the presently claimed subject matter is not solely limited to a search of the classes and subclasses in which they are classified.

The requirement is still deemed proper and is therefore made **FINAL**. It is further noted that the Examiner will consider rejoinder if a generic claim is found to be allowable.

Claims 170-175 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. This group lacks unity since the special technical feature "moisture responsive gel" is common which is evidenced by Sagel et al. (2002/0006387). See the rejection below for details.

### ***Claim Objections***

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 118 (e.g. water soluble salts) has been renumbered 176.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 102-116, 124, 137, 156-169 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

No adequate support found the recitation “a viscosity that increases in a more humid environment” as in claim 102 and “upon contact with a more humid environment” as in claim 156. It is not clear if applicant trying to say that “humid” and “moisture” have the same meanings. Please clarify. Further, no support found for “crosslinked homopolymers of acrylic acid” as in claims 114, 124, 137.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 62, 63, 64, 65, 66, 67, 68, 69, 70, 72, 102, 103, 104, 106, 107, 108, 111, 112, 113, 115, 116, 117, 118, 176, 119, 120, 121, 122, 123, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 138, 140, 141, 142, 143, 144, 145, 146, 148, 149, 150, 151, 152, 154, 155, 156, 157, 158, 159, 160, 162, 163, 164, 167, 168, and 169 are rejected under 35 U.S.C. 102(b) as being anticipated by Sagel et al. (2002/0006387).

Sagel discloses a dental whitening composition including a moisture responsive gel carrier comprising a moisture sensitive polymer complex and water soluble salt and a therapeutic agent dispersed in the gel carrier wherein the composition increases in viscosity upon contact with moisture (e.g. saliva) ([0048] and [0052]). Note that in the instant patent application publication paragraph [0040], the applicant discloses “Upon dilution with water, however, these carboxypolymethylene/PVP complexes surprisingly demonstrate an increase in viscosity, rather than a decrease in viscosity as would be expected of most aqueous compositions.” Accordingly, Sagel discloses carboxypolymethylene and PVP (polyvinyl pyrrolidone) and water in paragraphs 0048 and 0052. Sagel further discloses methylcellulose, which is a temperature responsive polymer [0062] and hydroxypropyl cellulose [0052] and carboxypolymethylene [0048] as

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a pH or ion responsive polymer and hydrogen peroxide and carbamide peroxide as a tooth whitener and its range [0046] and the amount of water in paragraph 0050. Sagel further discloses metal salts [0045] which are water soluble and tetraacetic acid (EDTA) as in claim 109 (see [0053]) and sodium hydroxide as in claim 110 (see [0051]).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 71 and 77-78, 105, 138, 139, 147, 153, 161, 166 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagel as applied to claims 62 or 102 or 156 above.

Sagel discloses the invention substantially as claimed except for the amount of moisture responsive gel carrier and functional polymer. It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use desired amount of the moisture responsive gel carrier and functional polymer, since it has been held that discovering the optimum or workable ranges involves only routine skills in the art. *In re Aller*, 105 USPQ 233. Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use desired amount of the moisture responsive gel carrier since it would depend on desired benefit and the

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environment it would be used in. For example, if the gel is being used for dental application, then one would use higher amount of moisture responsive gel so that the gel is activated by small amount of saliva available in user's mouth. Further, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use proper amount of the moisture sensitive polymer since it has been held that discovering the optimum or workable ranges involves only routine skills in the art. *In re Aller*, 105 USPQ 233.

Claim 73 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sagel as applied to claim 62 above, and further in view of Sagel et al. (6,136,297).

Sagel discloses the invention substantially as claimed except for sodium saccharin water soluble salt.

Sagel'297 teaches oral gel having sodium saccharin. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Sagel'387 by providing sodium saccharin as taught by Sagel'297 since sodium saccharin used as a sweetener and/or for balancing pH level.

Claims 74-76 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagel as applied to claim 62 above, and further in view of Montgomery (2003/0198605)

Sagel discloses the invention substantially as claimed except for hydroxypropylcellulose as temperature sensitive polymer.

Montgomery teaches hydroxypropylcellulose in dental compositions ([0056]). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

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invention was made to modify Sagel'387 by providing hydroxypropylcellulose as taught by Montgomery for formation of the oxidizing compositions and tooth whitening accelerator compositions. Further, it would have been an obvious matter of design choice to one skilled in the art at the time the invention was made to use a block copolymer as claimed in claim 76 for temperature sensitive polymer, since applicant has not disclosed that this solves any stated problem or is anything more than one of numerous shapes or configuration a person of ordinary skill in the art would find obvious for providing temperature sensitive polymer or for formulation of oxidizing compositions. In re Dailey and Eilers, 149 USPQ 47 (1966). Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to use hydroxypropylcellulose since hydroxypropylcellulose and block copolymer of claim 76 are art equivalent for their use and the selection of any of the these known equivalents would be within the level of ordinary skill in the art.

### ***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP



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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOGESH PATEL whose telephone number is (571)270-3646. The examiner can normally be reached on 8:00 to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriguez can be reached on 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/YOGESH PATEL/  
Examiner, Art Unit 3732

/Ralph A. Lewis/  
Primary Examiner, Art Unit 3732